

CAS 872-50-4

Substance name 1-Methyl-2-pyrrolidinon (also called N-methylpyrrolidone or NMP)

Toxicity

N-Methylpyrrolidone is listed by the state of California and the European Union as a developmental toxicant.^{1,2} In animal studies it caused reduced fetal and birth weights, developmental delays and impairment of cognitive skills in offspring.^{1,3,4}

Exposure

1-Methyl-2-pyrrolidinon is used as an industrial solvent for resins, paint strippers, and plastics in the semiconductor industry. It is also used as a finishing agent in textiles, as a pigment dispersant, and as a spinning agent for polyvinyl chloride.^{1,3,5} It is listed as an ingredient under the synonym (methyl pyrrolidone) in a nail polish remover and five mascaras in an online cosmetic database.⁶ The Danish EPA detected 1-methyl-2-pyrrolidinon in the coatings of children's wooden toys.⁷

References

1. California EPA, Office of Environmental Human Health Assessment (OEHHA). Maximum Allowable Dose Level (MADL) for Reproductive Toxicity for N-methylpyrrolidone for Dermal and Inhalation Exposures, March 2003. http://oehha.ca.gov/prop65/law/pdf_zip/NMPMADL31403.pdf
2. European Commission, Joint Research Centre, Institute for Health and Consumer Protection. European Chemical Substances Information System (ESIS) file for 1-methyl-2-pyrrolidone. <http://ecb.jrc.ec.europa.eu/esis/>
3. EPA Action Memorandum: Inert Reassessment: N-methylpyrrolidone (CAS Reg. No. 872-50-4), June 2006. <http://www.epa.gov/opprd001/inerts/methyl.pdf>
4. European Commission, European Chemicals Bureau. IUCLID dataset for 1-methyl-2-pyrrolidone, 2000. <http://ecb.jrc.ec.europa.eu/iuclid-datasheet/872504.pdf>
5. National Institutes of Health, National Library of Medicine, Household Products Database. <http://householdproducts.nlm.nih.gov/> Accessed May 2010.
6. Environmental Working Group. Skin Deep Cosmetic Safety Database. Accessed May 2010. <http://www.cosmeticsdatabase.com/>
7. Danish Ministry of the Environment, Environmental Protection Agency. Surveys on Chemicals in Consumer Products. Report 60. http://www.mst.dk/English/Chemicals/Consumer_Products/Surveys-on-chemicals-in-consumer-products.htm